



PO Box 150
Massena, NY 13662

June 1, 2018

Mrs. Justine Modigliani, P.E.
Division of Enforcement and Compliance Assistance
U.S. Environmental Protection Agency, Region 2
290 Broadway, 20th Floor
New York, NY 10007

Re: Arconic – Massena Operations
SPDES Discharge Permit NY001732
Response to Comments – EPA Inspection August 30 to September 1, 2017

Dear Mrs. Modigliani:

Provided below are Arconic's comments on the draft New York State Discharge Elimination System (SPDES) Discharge Permit NY001732.

Potential Non-Compliance Items

Comment 1

Based upon a review of the EPA ECHO database along with letters of non-compliance provided by Arconic the following exceedances of effluent limits for the period June 2015 to December 2017 (Table not included)

Arconic Response

The following responses to the permit limit exceedances have been grouped by "incident". Arconic maintains an internal compliance incident system that tracks compliance issues and related action items to completion. Each incident may have multiple permit limit exceedances that are related to the same root cause. Therefore, many of the action items listed below are related to multiple exceedances.

Outfall 008 Fluoride Daily Max (June 2015, July 2015, August 2015 and December 2015)

Beginning in June 2015, Arconic Massena Operations began experiencing elevated fluoride levels at Outfall 008. Provided below is a summary of corrective actions taken to resolve the compliance issue.

Correction Actions	Completion Date
Upstream sampling of Outfall 008 to fully understand fluoride source and improve tracking	6/19/15
Completed Environmental Investigation which indicated water in the Outfall 008 basin had come stagnant due to vegetation and beaver activity allowing fluoride levels to slowly build in the basin	7/10/15
Vegetation maintenance of the Outfall 008 conveyance	8/14/15
Further investigation of potential diversion of Outfall 008 waters to the Area III Impoundment. Solution deemed unacceptable based on head waters for tributary.	6/28/16
Investigation of additional alternatives	9/1/16
Further evaluation of permit limit development noted dependence on water hardness to determine toxicity. Limit developed based on hardness assumption.	6/15/17
Outfall 008 Fluoride limit modified in Revised SPDES permit to reflect actual hardness of waters within Outfall 008	6/1/18

Outfall 003 pH Maximum (November 2015)

Review of Arconic's actual Discharge Monitoring Report (DMR) for November 15, 2015 indicates a reported value of 7.5 SU. The information is listed in the table is incorrect.

Outfall 003 Settleable Solids Daily Maximum (May 2016)

Outfall 003 is the open-ditch stormwater outfall that runs on the west side of the potline and discharges to the power canal. This open-ditch has fine-clay and silt sediments that have settled over time and, if disturbed, can be picked up in the sample at the Outfall. A root cause investigation revealed that animal activity in the basin (beaver) created the disturbance. Provided below is a summary of corrective actions taken to resolve the compliance issue.

Correction Actions	Completion Date
Clean Outfall	5/27/16
Obtain permit and contractor to conduct nuisance animal removal from the area. Surveillance of nuisance animal activity performed routinely.	6/1/16

Outfall 01D Chloroform Daily Max (June 2016, July 2016, August 2016, and November 2016) and Fecal Coliform Daily Average (September 2016)

The Outfall 01D sanitary system uses sodium hypochlorite to reduce coliform in the treated water prior to the dual-media filtration and carbon treatment. Based on previous investigations, we have determined that chloroform generation is influenced by the concentration of chlorine present, retention time in the system, temperature of the water and other less controllable factors. Through investigation of the high results it was determined that the system that moves

water through the O1D treatment train cycles on and off during periods of low flow, however the addition of sodium hypochlorite to the system continued even during periods when the O1D system was not actively discharging. This likely resulted in excessive chlorination of the water and contributed to chloroform generation. In attempt to correct the over chlorination issue, chorine dosing was inadequate in the month of September 2016 which resulted in an increased fecal coliform result. Investigation and further corrective actions resulted in the facility switching disinfectants to potassium permanganate.

Correction Actions	Completion Date
Correct sodium hypochlorite addition issue to prevent over chlorination	8/2/16
Investigate and implement the use of chlorination substitute – Potassium Permanganate.	1/19/17

Outfall 01A Oil and Grease Daily Maximum (August 2016)

As noted in the DMR cover letter dated September 26, 2016, Arconic was instructed by the New York State Department of Environmental Conservation (NYSDEC) to analyze the backup sample for oil and grease due to an obvious laboratory error. Based on the historical absence of the Oil and Grease at this outfall and the ability to analyze a backup sample, guidance was provided to use the backup result without averaging. In addition, the averaging technique should not be used for reporting a maximum result.

Outfall 03A Fluoride Action Level (December 2016 and June 2017)

As noted in the EPA correspondence, the Outfall 03A Fluoride Action Level exceedance is not a permit limit exceedance. As documented in the DMR covers letters, following each individual event, Arconic conducted the additional monitoring required by the permit. No subsequent action was required.

Outfall 004 PCB-1242 Daily Maximum (April 2017)

From April 4th through April 7th, 2017 the Massena area received approximately 2 inches in rain in concert with significant snow melt which contributed to the Outfall 004/005 Impoundment overflow on April 7th. The overflow Outfall 004 lead to an exceedance for PCB's. The presence of PCB's in the Outfall 004 storm water basin is known and the primary reason for the treatment. There are no corrective actions for this exceedance beyond the treatment that is already occurring.

Outfall 001Fluoride Daily Maximum (May 2017 and July 2017), Benzo(a)pyrene Daily Maximum (May 2017), Aluminum Daily Maximum (May 2017 and July 2017)

Massena experienced approximately 6.42 inches of rain plus late winter snowmelt (normal average rainfall during this period is 2.82 inches) from April 2017 to July 2017. These

conditions forced Arconic to bypass the Area III Impoundment directly to the Outfall 001 without treatment. Normal flow path for the Area III Impoundment is transfer to the Central Impoundment and treatment in the Outfall 01A treatment system. Note that the Area III Impoundment was designed and is permitted to discharge directly to Outfall 001 however, Arconic chooses to provide additional treatment as a precaution. The intentional diversion of Area III Impoundment led to an exceedance of Benzo(a)Pyrene (BAP), fluoride and aluminum. Subsequent investigations indicate that the sediment build up in the Area III Impoundment leads to the carry-over of fluoride, aluminum and benzo(a) pyrene impacted solids during high flow events.

Correction Actions	Completion Date
Conduct Root Cause Investigation	6/26/17
Conduct Area III Impoundment Sediment Sampling	9/23/17
Investigate Impoundment Cleaning Options	4/1/18
Cleaning of Area III Impoundment	Scheduled for August 2018

Outfall 01F Total Cyanide Daily Maximum (December 2017)

On December 18, 2017, Massena Operations was operating the 01F Cyanide Treatment system in recirculation mode to ensure proper treatment prior to discharge. Normal operations include the operation in recirculation mode until proper treatment is achieved at which time we begin discharging. The collection of the process sample indicated 01F was running properly and the decision was made to move the system to discharge mode on the morning of December 19, 2017. Operations and discharge began at approximately 6 AM on December 19, 2017. Another process sample was collected during operation and analyzed in the on-site environmental laboratory. Upon completion of the analysis, (approximately 10 AM) the process sample results indicated an issue with the clarifier and the system was placed back into recirculation mode. Upon investigation, issues with both a mixer (inadequate mixing) and the sulfuric acid delivery system were identified.

Correction Actions	Completion Date
Determine root cause of the incident	1/29/18
Make repairs to mixer and acid addition system	2/5/18
Permanent shutdown of the Outfall 01F treatment system	6/1/18

Comment 2

In its June 27, 2017 letter to NYSDEC (Att. 8), Arconic indicated that in May 2017 at Outfall 01I, Aroclor No. 1242 was detected at 230 ng/l. Special condition 4b of the Permit requires that for samples above the Method Detection Limit of 65 ng/l that the permittee must evaluate the treatment system and/or the wastewater source and identify the cause of the detectable level of PCBs in the discharge and it also requires additional measure if the elevated PCBs continue. The June 27, 2017 letter did not contain the required evaluation of the treatment system. The July 27, 2017 DMR cover letter did not contain any additional information on PCBs at Outfall 011.

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Please indicate if this evaluation was conducted in subsequent months, and provide that information.

Arconic Response

Outfall 01I is an internal storm water outfall that discharges directly to Outfall 001. Arconic's root cause analysis indicated that the results were likely an "laboratory error or artifact" based on the following information. Outfall 01I had zero detections for PCBs in over a ten year span and that Aroclor 1242, which was reported by the laboratory, is not indicative of Arconic Massena Operations history. Lastly, during this same period of time, Arconic noted Aroclor 1242 "artifacts" in several other samples. Outfall 01I is not associated with any treatment and therefore Arconic did not conduct an evaluation of the treatment system. Outfall 01I is sampled weekly for Polychlorinated Biphenyls (PCBs) only. From January 2005 through May 2017 and since this exceedance, all results have been below the established limits. Please note this Outfall will be eliminated in the next revised SPDES permit effective June 1, 2018 based on the facts above.

Comment 3

Special Condition B of the Permit specifies that all requirements of the approved miscellaneous wastewater plan (MWP) must be complied with. During the inspection, a January 8, 2013 DEC approval of the wastewater management plan (assumed to be the same as the MWP) included:

- a. Identification of Miscellaneous waters for treatment at 01D or 01A- overflow from the sanitary equalization tank during wet weather events and 01D outages is sent to the 01A (CITF) treatment system where it will receive settling, dual media filtration and carbon adsorption. However, Outfall 01A does not have CBOD or Fecal Coliform limits that are contained in Outfall 01D and therefore discharging sanitary wastewaters discharging through Outfall 01A would not adequately monitored. Additionally, there are other effluent limits that Outfalls 01A and 01A do not have in common (Outfall 01D contains limits or action levels for aluminum, boron, cadmium, copper, cyanide, fluoride, lead, surfactants, zinc, individual phenols and individual VOCs, but outfall 01A does not. The MWP contains a list of wastewater that can be discharged via either outfall. Please verify that the 2017 Water Usage Schematic (Att. 7) contains the currently configured flow system. In addition, please explain the reason for 01A and 01D having different limits if they share some common wastewater streams.

Arconic Response

Arconic acknowledges that there is no fecal coliform and CBOD limits at Outfall 01A, however the fecal requirement at Outfall 01D is only seasonal and Outfall 01A discharges to Outfall 001, which has a CBOD5 requirement.

The comparison of Outfall 01D to Outfall 01A does not result in similar monitored parameters because they do not treat the same wastewaters. Outfall 01D treats waters from Outfall 01F, General Refuse Landfill Leachate, Secure Landfill Leachate, Outfall 01B effluent in addition to the sources listed in the Miscellaneous Wastewater Plan approved by the NYSDEC. Outfall 01A is limited to storm water, process waters from Area II and the items listed in the Miscellaneous

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Wastewater Plan approved by the NYSDEC. Based on this, the monitored parameters should not be the same.

The water usage Schematic (Att. 7) was correct, but has been updated to reflect future flows as identified in the SPDES renewal application submitted July 5th, 2017.

- b. Waters located in process sumps at Outfall 01B. Please indicate if wastewaters that are permitted to flow through other outfalls are being collected and discharged through Outfall 01B. And provide a list of these other outfalls.

Arconic Response

Oily waters (spills, compressor blow downs) are collected throughout the plant sites, stored and then treated through the Membrane treatment system, pH adjusted, filtered through activated carbon and then released to the O1D system for treatment again with ultimate discharge through Outfall 001. These waters are not released to any other outfalls.

Comment 4

As shown in photographs 866, 909, 910 there are uncovered and unstabilized material storage piles. Arconic employees explained that material storage piles would be used to cover concrete areas and not be ripping up the concrete. The area that they will be applying soil was greater was estimated to be over an acre. Arconic is required to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) as required by Special Condition 4.B of its Permit for construction activities 1 acre or greater. Arconic employees said that they don't need SWPPP because they will be applying the soil from the piles on top of concrete and not ripping up the concrete. However, the application of soils over an area 1 acre or greater would trigger the requirement to develop and implement a SWPPP.

Please Note that - Under the NYSDEC SPDES General Permit for Stormwater For Stormwater From Construction Activities - Appendix A defines Construction Activity(ies) - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

As shown in photos 911 and 912 there is a material storage pile with a blue tarp covering most but not all of the pile that was to be used for cover material by the remedial group. This material storage pile must be kept covered and proper erosion and sediment controls developed under its Best Management Practices (BMP) Special Condition A (Erosion and sediment Control and/or SWPPP). Arconic representatives said that they would make sure those piles are kept covered.

Arconic Response

We do not believe that the SWPPP was required to stage these materials on site because there has been no disturbance of soil within the permitted area. The identified materials above are not the result of any on site disturbance of soils within the property. They are soils which have been transported into the facility to render demolished sites back to a vegetative state. However, using NYSDEC SWPPP as guidance, Best Management Practices (BMP's) have been established to manage the staged materials. The piles are protected by silt fencing and outfall drains have been protected by hay bales and filter fabrics. Visual inspections are conducted as part of the Area I BMP inspection program and there have been no degrading effects at the outfalls since the materials were placed. Use of these soils is slated for this summer's growing season. A SWPPP will be developed and an NOI will be filed prior to work that will involve the repositioning of these soils in the summer.

Areas of Concern

Comment 5

On August 29, 2017, the inspection team was not allowed to inspect Outfall 004 because of an asbestos abatement project was being conducted.

Arconic Response

The USEPA was provided full access to the Outfall 004 treatment system and SPDES outfall (located within Building 156). The building referenced above was no longer part of the Outfall 004 and has since been abated and demolished. This activity did prevent the USEPA from observing the actual confluence of Outfall 004 effluent with the Grasse River. Due to the ongoing work at the time of the inspection, the USEPA was provided a view of the confluence from the adjacent bridge.

Comment 6

The Central Impoundment (Outfall 01A) consists of an east and west basin with a total volume of 36 MG. Based on its August 25, 2017 letter, on July 25, 2017, Arconic identified that there was a 1.77" rainfall event at the same time that the Central Impoundment System West Chamber was down for maintenance and necessitated the redirection of the Area III Impoundment directly to Outfall 001 instead of flowing through Outfall 01A. Arconic planned to take the east basin down in 2018 for maintenance. The January 8, 2013 DEC Letter approves the current Wastewater Management Plan Update (Art. 2) also authorizes Area I waters from Pump Station 154 to be discharged to Outfall 004 instead of Outfall 01A. Please provide the current operation status of the east and west basins of the central impoundment.

Arconic Response

Arconic is currently operating the Central Impoundment as designed with both basins operational. The Area III Impoundment is being discharged to the Outfall 01A treatment system. Area I waters and pump station 154 are currently being conveyed to the Outfall 004

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Impoundment and treatment system. Please note that routine operations and maintenance of impoundments and the subsequent diversion of water are necessary to maintain compliance with the permit.

Comment 7 (Comments Extracted From Table)

Outfall 001

As shown in photograph 858, Attachment IA, the boom at Outfall 001 was said to be changed quarterly. As shown in photo the inner boom had much vegetative growth. Please verify the cleaning and changing frequency for the booms.

Arconic Response

The booms are changed at Outfall 001 on a seasonal basis. The booms are inspected and replaced when necessary.

Alarm for outfall (dialer) has been disconnected because control room was receiving unwarranted alarms. Paper rolls in flow were missing since Feb. 2017 for the river monitor.

Arconic Response

The auto dialer alarm has been disconnected and removed. Arconic has no intention of replacing the unit as this time. Arconic maintains a 24-hour 7 day per week security presence with routine patrols at the Outfalls. Any power outage would be noted during the inspections. Arconic no longer uses the paper rolls, nor is there any requirement to do so.

Outfall 003

Outfall 003 (18" Parshall Flume) had two head sensors to measure submerged flow Ha/Hb. The flow charts for the outfalls did not include a chart for head and submerged head, only a chart based on the head in the converging section of the flume. Does this outfall become submerged? If so does the flow program at 003 take submergence into account?

Arconic Response

The Outfall 003 flume does become submerged at times. The flow meter is programmed to account for the potential submergence. Please note that the flow meters are calibrated on an annual basis by a third-party contractor.

Outfall 01F

Clarifier for cyanide and fluoride wastewaters from on-site. Was not treating wastewater at the time of the inspection. Arconic representatives said that Pot Pile A wastewater collection is shut down from June to October 1. Indicated that the 01F treatment plant was built in 1994 and are planning to upgrade this facility (what is status of upgrade)?

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Arconic Response

Upon the issuance of the new SPDES permit (expected June 1, 2018), the Outfall 01F treatment system will be eliminated. Alternative treatment for these waste streams has been approved by the NYSDEC and will be implemented.

Outfall 01D

No flow at the time of the inspection. Backwash tank was still flowing. Potassium Permanganate pump was broken. Waiting for parts. Feeding potassium at a different location (Building 79) (O1B and O1F)

Arconic Response

The potassium permanganate pump has been repaired and is operating.

Outfall 004

Pump 1 VFD was out of service. Said that there was a replacement available and new pump would be installed the following week. What is the status of the pumps?

Arconic Response

Arconic has replaced the Outfall 004 pumps. The repaired pump has been repaired and will be used as a spare.

Arconic representatives indicated that they are considering additional treatment for 01G or expanding the 004 lagoon. What is the status of the 01G treatment or 004 lagoon expansion?

Arconic Response

Arconic is currently considering the addition of a closed loop chiller for Outfall 01G waters. There are no plans for an Outfall 004 expansion.

As shown in Photo 884 in Att. 1 a there was soil and pallets at the 004/005 impoundment that should be cleaned up. Clean up debris at 004/005 impoundment.

Arconic Response

Photo 884 shows materials near and around ST-168/ST-169. This area is not within the Outfall 004 watershed. Regardless, the material depicted in the photo have been removed from the area.

Outfall 01G

Outfall 01G (heat treat waters from Area I) was said to flow to 004 but the permit specifies that Outfall 01G flows to Outfall 001. There appeared to be a buildup of sediment at the bottom of discharge basin (01G-140). Should clean box. Remove sediment from 01G-140 discharge basin.

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Arconic Response

Arconic has removed the sediment from the Outfall 01G discharge basin.

01G consists of the Bldg 131 and 140 separate discharge points 01G-131 - No flow O GPM through 90 Deg. V Notch Weir. 01 G-140 V Notch Weir 0.85" (751 gpm). (The Staff gauge at 01G-140 was at a level of 1.55'). Please explain the correlation between the staff gauge and the head measurement for the V Notch Weir at 01G-140.

Arconic Response

Arconic has confirmed the correlation between the staff gauge and the measured head at Outfall 01G. The maximum head at Outfall 01G is 1 foot therefore the one foot mark on the staff gauge actually is measured as 0.

01G was said to be currently flowing to Outfall 004, not to 001 as specified by permit. The 2013 WMP does indicate that Outfall 004 would receive flow from Area I waters from Pump station 154. Please verify if Outfall OIG is included in these PS 154 wastewaters?

Arconic Response

Outfall 01G conveys water to Pump Station 154. The Pump Station 154 has the ability to convey water to Outfall 001 or the Outfall 004/005 Impoundment.

Outfall 01I

As shown in photo 887 the label at the outfall indicates that there is a 1' Palmer Bowlus Flume. The flow chart submitted by Alcoa indicates that 01I is a 24" Palmer Bowlus Flume (Attachment 3). During the inspection, the display for the flow meter indicated head of 2.268" and a flow of 127 gpm. This head and corresponding flow rate is based upon a 24" Palmer Bowlus Flume. Please clarify the actual size of the flow meter and ensure that the label on the flow meter is accurate.

Arconic Response

The actual size of the flow meter is a 24 inch Palmer Bowles Flume. Upon further review the label is accurate. Effective June 1, 2018, Outfall 01I has been eliminated from the permit. No further sampling is required.

Are PCB samples grabbed from composite sample tubing? Verify if PCB sample collection conforms to approved analytical method.

Arconic Response

PCB samples are pulled from the confined space via a Teflon section line on the portable autosampler. Effective June 1, 2018, Outfall 01I has been eliminated from the permit. No further sampling is required.

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Outfall 008

21" Palmer Bowlus Flume, the refrigerator was not cold (14 Deg. C) but said that it is only turned on the first week of the month. Flow at 72 GPM (0.142'). Flow meter was Calibrated last on 9/13/16. Based on the formula for flow through a 21"

$$\text{GPM} = 2069 \text{ H(ft)}^{1.9}$$

A head of 0.142' would translate into a flow of 50.7 gpm. The flow meter reported a flow of 72 gpm with a head of 0.142'. The flow charts at [http://www.012enchannelflow.com/assets/u12loads/documents/21-inch Palmer-bowlus discharge table.pdf](http://www.012enchannelflow.com/assets/u12loads/documents/21-inch%20palmer-bowlus%20discharge%20table.pdf) indicated that at flows 0.17' and below that this size flume is inaccurate due to fluid flow properties and boundary conditions. Please check flow calculations.

Arconic Response

Arconic acknowledges that flows less than 0.18 feet within the existing flume will result in inaccurate flow readings.

Said that power at Outfall 008 is lost frequently and Facility. Representatives need to reset the breaker. Power outage issues at Outfall.

Arconic Response

The power issues have been resolved.

Area III Impoundment

Area III Impoundment 1 of 4 pumps has been down since July 28, 2015. Dead frogs also seen on pond liner (897). Influent to Pond shown in photo 896. PCB influent may be sampled via composite sampling hose. Please ensure that Teflon tubing is used for these samples in accordance with EPA Method 608. Said that they don't use the Area III pond overflow. What is the status of the pump and the PCB tubing?

Arconic Response

The Area III pump has been removed and currently being repaired. PCB samples from the Area III Impoundment are collected via a Teflon beaker.

Outfall 03A

Contaminated groundwater outside Pot Lines. The outfall did not look like it was flowing and the line may need to be cleaned since no flow was entering the manhole. The Area III BMP checklist for June 28, 2017 and July 24, 2017, identified that 03A tested outside the monitor limits for June (likely for Fluoride) and indicated that lines should be cleaned on Aug. 29th. (See Attachment 4). Maintain (clean/inspect) line if needed.

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Arconic Response

Arconic and Alcoa periodically clean the underground utilities in this area. The cleaning referenced above was conducted in January of 2018.

Outfall 01E

Ingot WWTP said to be owned by Alcoa, but part of Arconic SPDES Permit. A composite sample is being conducted daily for process control. Have a 1' Parshall Flume for flow monitoring. Treatment consists of a scale pit, rope skimmer (operates on a timed basis). The scale pit was said to be cleaned once per year in September (by Alcoa). The Area II BMP Checklist for June 28, 2017, (Alt. 5) identified that the ingot wastewater settling wells were due for cleaning. Status of cleaning ingot wastewater wells?

Arconic Response

The settling wells have been cleaned.

Composite Sampling Refrigerator Temperature was 15 deg. C (high temp), and was not working. Arconic employees explained that they put bagged ice in the composite sampler. Said that sampling conducted in first two weeks of month. Exhaust fans were not properly operating in outfall building. Composite sampling refrigerator and ventilation fan status?

Arconic Response

The autosampler temperature sensor has been replaced and is now maintaining temperature. The exhaust fans have been repaired and are operational at this time.

There is a bubbler and an ultrasonic flow meter at 01E. The bubbler is being used for flow reporting and the ultrasonic used for polymer feed. As shown in the photos there was an accumulation of floating material in the clarifier and growth attached to the weirs. Facility representatives explained that sludge had not been removed from the clarifier since 2007. Clean clarifier floating material and accumulation on weirs - need to ensure proper O&M of clarifier and proper sludge removal.

Arconic Response

As part of the operations and maintenance of the wastewater treatment facility, Arconic monitors the clarifier for floating and accumulated solids. Should conditions dictate additional cleaning or sludge removal to ensure proper operation appropriate actions will be taken.

Oil and grease samples are run at ALS Labs in narrow mouth bottles. Oil and Grease must be collected directly into the sampling container (which is typically a wide mouth glass jar). Concern with oil and grease sample container.

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Arconic Response

Arconic's contract laboratory supplies pre-preserved sample bottles specifically for Oil and Grease analysis. The samples bottles are narrow mouthed. Based on Arconic's review of the EPA Method there is no specific criteria regarding the use of a wide mouth or narrow mouth collection device.

Comment 8

During the inspection, we also visited the pot line area owned by Alcoa, but ultimately discharges under the Arconic SPDES permit. As shown in photos 916 to 924 there was Alumina dust around stormwater inlets and in many places in the yard due to leaks of alumina from leaking air slides, air lifts and other sources. The Best Management Practices Plan portion of the Permit and the BMP Plan for the facility does require good housekeeping and preventative maintenance for this area. The Area III BMP Checklist in house inspection dated July 24, 2017 identified poor housekeeping in Area III potline courtyard area and also identified that storm water inlet controls (drain pyramids) were installed on some inlets. It did also identify numerous leaks in the alumina conveyance system. Similar findings were made in the June 28, 2017 Area III BMP Checklist. (Attachment 4) Alcoa representatives said that they sweep the courtyard twice per week, but sweeper had been broken for 2 days and said that stormwater inlets are vactored once per quarter. Improved housekeeping and repair of leaking equipment is needed in this area.

Arconic Response

Arconic continues to routinely inspect Best Management Practices as required. Recent activities by Alcoa to control alumina release include the use of contract labor to clean potroom courtyards and additional work on the alumina air slides seals to prevent release of alumina.

Comment 9

The Outfall 004/005 Impoundment (photos 882 to 884) was said to be designed for a 19 year storm, and overflows at a height of 17'. Based on the letter from Arconic (excerpt below) it overflowed in July 2017. The letter indicated that there was a violation due to dewatering of central impoundment as well. Special Condition O of the Permit authorizes discharges from 005 and bypasses of the 004 carbon units when storm water runoff exceeds the design storm. The design storm was thought to be a 19-year storm. Please verify whether the 004/005 system is designed to handle the 25-year storm, or if additional capacity is needed in this system.

Arconic Response

The current design capacity of the Outfall 004/005 Impoundment is the 19-year storm. At this time, there are no plans for expansion of this impoundment. Arconic is investigating other potential projects to reduce the volume of water treated at the Outfall 004/005 Impoundment as part of its continuous improvement programs. No additional treatment capacity is required.

Comment 10

The Area III Carbon - BMP Checklist dated August 23, 2017, (Att. 6) identified that there was poor housekeeping in the coke/pitch storage area. And indicated that the door needs to be kept closed to avoid the escape of carbon dust. What is the status of the housekeeping in this area?

Arconic Response

Arconic continues to routinely inspect Best Management Practices as required. Recent inspections indicate the coke/pitch storage area door reference above had been closed..

Comment 11

Based on review of records for the June 2017 DMR at Outfall 004 an Oil and Grease exceedance of 17.5 mg/I (limit is 10 mg/I) was said to be due to suspected lab error, possibly inadvertently spiking the sample and the backup preserved volume was analyzed with a result of non-detect. The facility reported result of 0 mg/I Oil and Grease at Outfall 004 in the DMR. Technically if duplicate samples were conducted an average of these 2 results should have been reported.

Arconic Response

As noted in the DMR cover letter dated September 26, 2016, Arconic was instructed by the NYSDEC to analyze the duplicate sample for oil and grease. Based on the history of the outfall and the presence of a duplicate sample, guidance was provided to use the duplicate result without averaging. In addition, the averaging technique should not be used for reporting a maximum result.

Comment 12

The June 2017 DMR provided during the inspection included the Analytical Test Methods for Arconics different labs - Test America (TA), Life Science Labs, ALS Environmental, Pace and Alpha:

- a. Available Cyanide by TA Lab- lists method 01A-1677. 40 CFR 136.3 specifies method OIA-1677-09 but the Permit does specify 01A-1677 (special condition F). However, the Reporting Limit (RL)/Method Detection Limit (MDL) for this parameter did not include units.

Arconic Response

Arconic has added the units to the Reporting Limit (RL)/Method Detection Limit (MDL) spreadsheet as requested.

- b. For Phenolics Total 4AAP by ALS Lab, the method is listed as EPA Method 420.4(modified) please verify that the modified method is an approved method.

Arconic Response

The method described above is not part of the Arconic Massena Operations standard methods.

Comment 13

Review of the June 2017 DMR and lab reports indicated that:

- a. The DMR did not have a box for reporting the individual monthly BNAs at Outfall 01B as required by the Permit. Based on the lab report, Arconic did conduct the necessary monitoring for reporting this data (Phthalates, PAHs, Phenols);

Arconic Response

Arconic completes the DMR as provided by the NYSDEC. All appropriate sampling and subsequent data are provided monthly via the DMR submission to the NYSDEC

- b. There are several instances where Arconic was rounding the numbers reported on the DMR. For example, the average flow at Outfall 001 was 67,611 gpd based on the flowlink report, but was reported on the DMR as 67,600. TDS at Outfall O ID based on the laboratory reports was a monthly average of 417 and a daily max of 562lbs/day but was reported as 420 and 560 lbs/day. Similarly, the TDS concentrations were reported as 880 and 930 mg/l on the DMR but the lab reports for the monthly average and daily maximum reported 875 and 934 mg/l respectively on the DMR.

Arconic Response

Arconic has consistently rounded its flow data to 3 significant figures. All reported analytical data is rounded to two significant figures.

- c. 01H Fact Sheet indicates production based limitations under 40 CFR 467.33 (were based on 434,000 and 130,000 lbs/day) well above the production in June 2017 which was 1,740 tons per month which is 204,000 lbs (if a 17 day month used as was used in the flow data for June 2017) or 116,000 lbs per day if a 30 day month was used.

Arconic Response

At the time of the EPA's visit, the Arconic SPDES permit had not been revised in 12 years. As mentioned previously, the new SPDES permit, effective June 1, 2018 has made the proper adjustments in production volumes.

- d. Arconic reports its Endothall usage and discharge concentrations per May and June 2016 letters at outfall 01A. Please provide the DEC approval of Endothall usage and the allowable concentrations.

Mrs. Justine Modigliani, P.E
USEPA
June 1, 2018

Arconic Response

Endothall usage is reported on an application basis and Arconic has an Approved Water Treatment chemical (WTC) for this Chemical. Reporting usage was a requirement under the old application permit (#6-A17-05) which NYSDEC subsequently determined was not necessary due to our Impoundment being lined. The agency requested we continue to report results in the DMR cover letter.

Comment 14

The Chain of Custody sheet for the PCB Analysis conducted on June 1, 2017 by Alpha Labs did not indicate that the sample was kept on ice $\leq 6^{\circ}\text{C}$ as required by 40 CFR 136.3 Table 2 (unless sample analyzed in 15 minutes). The sample was received at Alpha Labs on June 6, 2018.

Arconic Response

Please review Page 14 of the Alpha Laboratory report. The report clearly indicates that samples were received by the lab at a temperature of 3.3 degrees C, well below the compliance threshold of 6 degrees C. It should also be noted that these samples were kept in the Arconic refrigerator over the weekend, hence the delay between collection and laboratory receipt.

Comment 15

For Outfall 01E the Arconic reported 7000, 3370 Tons round ingot casting (Direct Chill Casting) and continuous caster respectively. How does DMR differentiate between the two, it appears that the DMR should be modified to distinguish between these 2 different data points.

Arconic Response

Arconic does not control the DMR forms. We do however report both production numbers in our monthly DMR submission as required by the permit.

Comment 16

Alpha Labs reported a lower Method Detection Limit for the duplicate (0.05 ug/l) than the sample (0.065 ug/l), what is reason for the different MDLs on a duplicate sample. (Photo not included).

Arconic Response

The method detection limit for PCB Aroclor's at Arconic Massena Operations is 0.065 ug/l which equivalent to the SPDES permit limit. The reference of 0.05 ug/l method detection limit is incorrect.

Mrs. Justine Modigliani, P.E
USEPA
June 1, 2018

Comment 17

Review of the laboratory sheets provided by Arconic for June 2017 showed the following report, but it is unclear from the information where this sample was taken. (Photo not included)

Arconic Response

The location of this sample is Location 4, which is an internal process sample location.

Please contact me at 315-212-9069 or Todd.Furnia@Arconic.com with any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Todd Furnia". The signature is fluid and cursive, with a large initial "T" and a stylized "F".

Todd J. Furnia
Environmental and Security Manager

Cc: Env. File Copy – Arconic
T. Long – Arconic
J. Dimura – NYSDEC Albany
D. Rarick – NYSDEC – Region 6